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THE ALLEGED FORMER NESTING OF THE OSPREY IN THE ENGLISH LAKE DISTRICT.

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THE approaching publication of a Fauna of the English Lake District leads me to offer a few remarks on a subject which has already been treated at some length by the Rev. H. A. Macpherson, in 'The Zoologist' for 1889 (p. 256), and as my name is there mentioned in a foot-note, I wish to explain, in as few words as possible, how the matter seems to me to stand.

Willughby, in his 'Catalogue of English Birds' (Book I. chap. ix. of "The Ornithology," p. 21), gives three species, viz.:—

1. "The Eagle," called also on p. 58 the "Golden Eagle"
(*Aquila chrysaëtus*).
2. "The Sea-Eagle or Osprey, *Haliaëtus sive Ossifraga*"
(*Haliaëtus albicilla*).
3. "The Bald Buzzard, *Balbusardus Anglorum*" (*Pandion haliaëtus*).

It is under the "Sea-Eagle or Osprey" that Willughby speaks of the aery in Whinfield Park, Westmoreland. Pennant also, as well as the best recent authorities, refer this nest to the White-tailed Eagle, for, if it had belonged to the Osprey, Willughby would have mentioned it under his "Bald Buzzard." So far, then, from stating distinctly that *Pandion haliaëtus* used to breed in Westmoreland, it is clear that Willughby was referring

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to the White-tailed Eagle. Nor is Mr. Macpherson's objection fatal, that there are no precipices in Whinfield Park, for, like the Osprey, the White-tailed Eagle is well known to build occasionally on trees: and, if head-money was, at the time, offered for the destruction of Eagles, so much the more need would there be for preservation on the part of the Countess of Pembroke, especially if the nest was placed in a situation so exposed as a tall tree.

Dr. Heysham, in his Catalogue of Cumberland Animals prefixed to the 'History and Antiquities of Cumberland' (1794), includes only two Eagles, these being (2), the "Cinereous or White-tailed Eagle," breeding among the rocks near Keswick every year; and (1), the "Sea-Eagle, *Falco ossifragus*," of which there used, a few years previously, to be an annual nest at Ullswater, from which a trout upwards of ten pounds weight was taken. Here again the Sea-Eagle, is clearly *H. albicilla*, and further there can be little doubt that this nest belonged to the White-tailed Eagle, because in Latham's 'Synopsis,'—Supplement, p. 11 (1787),—under "Cinereous Eagle," the same or a similar story is told, on the authority of Dr. Heysham, relating to an Eagle whose tail became white after six or seven years in captivity. Latham's exact words are:—"In a nest of one of these birds, near Keswick, in Cumberland, was found a Gray or Hulsewater trout, of above twelve pounds weight. Dr. Heysham, who informed me of this, added to the observation that he obtained the bird alive, and had kept it above ten years at the time of his communicating to me the account; and that it was either six or seven years before the tail became white."

Now, if this story refers to Ullswater, it is sufficient proof that this nest belonged to the White-tailed Eagle. If, on the other hand, Heysham was speaking of the White-tailed Eagles which had their nest near Keswick, we may well suppose that these birds were accustomed to seek their prey, the great lake trout, at Ullswater, and may thus have been frequently seen fishing by Richardson.

The Rev. W. Richardson, writing in 1793 (Hist. of Cumberland, p. 449), gives only two Eagles as found about Ullswater:—(1). "*Falco chrysaëtos*, Golden Eagle," of which he tells us that a pair had an aery in Martindale in 1778 and 1779. (2). "*Falco Haliaëtus*, Osprey or Fishing Eagle," which was "frequently seen fishing."

Now, I do not think that we need attach much importance to Richardson quoting Berkenhout's name and diagnosis of *Falco haliaëtus*, since he could hardly have been able to compare it with the bird itself—and he would be likely to adopt the name of "Osprey" as current amongst his neighbours, and at that time used for the Sea Eagle. Moreover, it is not probable that Richardson could have overlooked the Sea Eagle, when we know that it was found in the district, and, as I read Heysham, on the very same lake of Ullswater.

Hence I think we may fairly conclude that the aery in Whinfield Park belonged to the White-tailed Eagle, and was probably built on a large tree; that Heysham's two Eagles represent only one species, the White-tailed Eagle; that Richardson's two Eagles are the Golden and the White-tailed; and that the Osprey eagle-tree on the banks of the Eden also belonged to the White-tailed Eagle. And it seems to me that hitherto no satisfactory evidence has been adduced in favour of the Osprey breeding formerly on the English Lakes; nor, I may add, in any part of England, though a nest was once reported to me from Somersetshire (see 'Ibis,' 1865, p. 9).

NOTES ON BIRDS SEEN IN SWITZERLAND.

By O. V. APLIN

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So little is written upon the birds of Switzerland in 'The Zoologist' that I venture to offer the following slight notes made during a short tour in the Bernese Oberland, in company with Mr. W. Warde Fowler, in June, 1891. Shortly speaking, the ground covered was this:—We arrived at Bern *viâ* Porrentruy (1457 ft.), Delémont (1430 ft.), and Bienne, and I was able to see a few birds from the train while passing through the Jura in the early morning. From Bern we went to Thun (1840 ft.), and up the lake to Interlaken (1860 ft.), then up the lake of Brienz to Meiringen (1968 ft.). On the second day at Meiringen we took up our quarters at the Hôtel Alpbach, which is perched on the precipitous wooded side of the Hasliberg, 900 ft. above the village (*i.e.* about 2900 ft.). From here we visited the woods and pastures, and the pine belt of the Hasliberg in the direction of the

Mägisalp, and also the woods between the Brünig Pass and the Alpbach. Thence we went by the Oben Hasli-thal and the Im-Hof up to the Engstlen Alp (6100 ft.), and over the Joch Pass (7245 ft.), across the Oben Trübore and Gerschni (4100 ft.) Alps to Engelberg (3350 ft.); then down the valley of the Engelberger Aa to Stanz and Stansstad, and across the lake to Lucerne and so back to Bern. As will be seen, we passed over the ground described in 'A Year with the Birds,' by Mr. Fowler. For some days the latter was accompanied by Johann Anderegg, whose name will be familiar to readers of the chapter in that work on the Alps in June, and who has an intimate knowledge of the birds of the district.

Turdus viscivorus, Missel Thrush.—Common in pine woods below the Mägisalp, about 4500 ft. Two or three pairs apparently breeding in the scattered pines at the edge of the Engstlen-Alp.

T. musicus, Song Thrush.—One heard near the Alpbach Hotel (2900 ft.), but it was not until we ascended a little higher, and spruce—with birch and hazel here and there—became the prevailing tree, and the ground was covered with ling and bear-berry, that we saw any Song Thrushes. Here two or three could be heard in song at once. One, sitting on a spruce top, had a very white breast—*i. e.* showed little or none of the buff tint observed in our English birds. I noticed the same peculiarity in a specimen from Skye. In the pine woods (about 4000—5000 ft.) it becomes a common bird, and we observed it in the high woods near the Brünig Pass, but did not meet with it on the Engstlen.

T. merula, Blackbird.—A bird of the gardens in lower grounds. Common at Bern and Thun. One heard above the Alpbach, but with this exception not noticed above 2000 ft. One singing from the top of a stake in a vineyard at Bienne.

T. torquatus, Ring Ouzel.—Not met with until we reached the Engstlen-Alp, where four or five pairs were breeding in the stunted *Pinus cembra* on the alp and in the pines at the edge. As the males had bright but light orange-yellow bills,—much less deep and rich than the Blackbird's,—and a good deal of white on their wings, they should, I suppose, be called *T. torquatus alpestris*. The females were very light and brown. One pair had a nest on a horizontal bough—about three feet from the trunk—of a very old *Pinus cembra*, hoary with shaggy lichen, standing on a rock, as they all do here. The next was about seven feet from the top

of the rock, and fifteen at least from the ground below. The young, which were nearly fledged on the 24th June, had left the nest next day, so I took it down. It was composed of the following materials:—First, a few twigs, then coarse grass, a little moss and hairy lichen; then a thick lining of the rotten peat-like substance found underneath the heather and lichen on the ground. This was in lieu of mud, which was probably not to be had when the birds built,—and indeed could not be obtained close to the house then,—and no cows had come up to the alp even at the date of our visit. Lastly, a thick, warm inner lining of fine dead grass. Another pair apparently had their young hidden under some big rocks; the anxiety of the birds for their young enabled one to watch them closely. We observed a pair a little way below the top of the Joch Pass on the N.E. side.

Saxicola cenanthe, Wheatear.—One on the stony slope at the upper end of the Engstlen.

Pratincola rubetra, Whinchat.—Seen at Münster in the Jura. Fairly common at Interlaken, Meiringen, and extended up to the pastures on the Hasliberg to about 3000 or 3500 feet, but not many. Very common about the hay meadows, &c., in the valley of the Engelberger Aa between Engelberg and Stansstad.

Ruticilla phœnicurus, Redstart.—One male at Bern. Common at Thun about Hotel grounds and on swaths of new-mown hay-grass; young out of the nest on June 18th, much more spotted than those of the Black Redstart. Many at Interlaken. Common about the outskirts of Meiringen, about the cherry, walnut, and pear orchards. Certainly more abundant about there than I ever saw it in England, but Anderegg said it was more common than usual. This fact was interesting in connection with the increase of the Redstart in some parts of England. Watched one to its nest in the gable end of a chalet. Two or three pairs seen outside Stansstad.

R. titys, Black Redstart.—A very common, conspicuous, and well-distributed bird, having a considerable range in altitude. In the towns, the villages, the scattered chalets, as well as in the mountains beyond human habitations, it is met with. In Bern you hear the song, and trace it to the bird sitting like a black dot on the great white buildings; one frequented the tower of the Cathedral, and another affected that of the Benedictine Monastery at Engelberg. We found it on the Tannenband up to

about 7500 ft. on the rocky slopes, and it seems to breed in rocky places at lower elevations also. As I saw it at Suberg, near Bienne (about 1450 ft.), this gives it a range of 6000 feet. I saw young out of the nest being fed in the wych-elms below the Rathhaus in Bern on the 17th June, and another full-grown one foraging for itself in a kitchen-garden; these were dark grey birds, and were hardly spotted at all, as the young of our bird are. But there they would certainly breed again, as the males were in full song; so, too, at Meiringen, where young had flown by the 19th, and the males were singing; higher up nesting was in full swing, and we watched a pair going in and out of the eaves of a chalet at Golderen on the 22nd. On the Engstlen, the females seemed to be sitting on first nests, as we saw only males and no young birds. So, although the Black Redstart is said to rear two—and sometimes three—broods in the season, this must apply to the valleys only. On the high grounds they probably rear only one, as, I believe, does our bird in England. They certainly sing, and apparently breed, in a plain grey dress, without any white on the wing, both at Meiringen and in the chalets in high pastures. But I saw old males on the Engstlen Alp and on the Tannenband up to about 7500 ft. The song I usually heard was short, more rapid than that of our bird, and seldom included what, as far as I could make out, were the whole of the notes, viz. "chichi weo weo cheo che-dedede." A bird on the Engstlen sang incessantly a curious song. To his ordinary notes he added, after a slight interval, "tiree-wee," and sometimes prefixed a grating sound like a grasshopper's song. This strange sound, which sometimes preceded the song, may perhaps be expressed as "ki-wi-wig," low and grating, the sound being produced from the back of one's throat. The bird was rather peculiar, very light (F., who paid great attention to it, said extremely so) on the head and back.

Cyanecula leucocyana, Bluethroat.—A fine male, with conspicuous white spot on the breast, was perched on a pear tree near the water-mill in Golderen (about 3500 ft.), where it was still spring on June 21st, the pear-blossom being not yet over and the hay-grass dotted with early purple orchids. In the Bern Museum there is a specimen of *C. wolffi*, labelled "Bern," and one of the present form merely marked "Sweitz"; it is possible that the latter is more of a mountain bird than the former; I have a specimen of it labelled as from the Vosges.

Erithacus rubecula, Redbreast.—In song at Thun, at the Alpbach, and, more commonly, in the spruce, hazel, and birch woods above there (about 3000 to 3500 ft.). Also in woods at the top of the Brünig Pass, and between there and Alpbach.

Sylvia cinerea, Whitethroat.—Not common. Seen in flat ground (the Böödeli) east of Interlaken; one near Meiringen, and some in the valley of Engelberger Aa.

S. atricapilla, Blackcap.—Not so common as the next species. In song at Bern, in gardens and Cathedral Terrace. Several at Thun. One near Stansstad.

S. hortensis, Garden Warbler.—Feeding young in box-bush in garden of Hotel Bellevue at Thun. In song at Meiringen near the Reichenbach; above and below the Alpbach; in fact, common in the valley and well up the wooded slopes. On the Pfaffenwand (at about 4500 ft.), at Engelberg, and several about Stansstad. The song is louder and more highly pitched, I fancied, than what we hear in England. Two very fine caged birds hanging outside a stall close to the bear-pit in Bern gave me a good opportunity of listening to the low, rather grating prelude, which can only be heard at close quarters.

Regulus cristatus, Golden-crested Wren.—In big pines in gardens at Thun. In the pine woods above Im-Hof (2054 ft.). In the Bern Museum a male Goldcrest is labelled *ignicapillus*; this is a common mistake, but it is less usual to find a female Firecrest labelled *cristatus*, as one also does there.

Phylloscopus rufus, Chiffchaff.—In song above Alpbach in spruces. In the pine woods at Brünig (about 3200 ft.). In song on wooded cliffs near Stansstad, and in pines at Worb, near Bern (about 2500 ft.).

P. sibilatrix, Wood Wren.—On the N.W. side of the road over the Brünig Pass is a fine old beech forest, the trees having beautifully smooth silvery trunks. Here were several Wood Wrens in song.

P. bonelli, Bonelli's Warbler.—Abundant at Thun on wooded slopes of pine, beech and oak, with undergrowth of hazel. The song is something between that of the Wood Wren and the Lesser Whitethroat, but wants the shiver of the former and the metallic quality of the latter. It is short, of less duration than that of the Willow or Wood Wrens, and is sometimes uttered with an outburst, as it were; but the tone and amount of energy put into

the song varies. The alarm note, "pee-ip, pee-ip," is very soft and low. We found a nest by watching the old birds. It was on the steep sloping ground, at the foot of a hazel-stump, and was formed on the outside of dead leaves of the beech and oak, very much decayed and broken, and fine dead grass, and was lined with finer grass, fibrous roots, and a few black cow-hairs. It contained four young, a few days old at most, the down on which was slate-coloured (no yellow tinge), and inside of mouth bright yellow. In general appearance Bonelli's Warbler is a brownish grey bird, dusky (not white) underneath—a tinge of yellow perhaps on the flanks. They are very restless birds: the cock of the pair to which the nest belonged sang with food in his mouth. I have known the Willow Wren do this. This was the common *Phylloscopus* in the localities we visited, but it does not, I believe, go so high as the Chiffchaff. Bonelli's Warbler was observed on the wooded slope on the Reichenbach side of Meiringen; on the slopes on the opposite side, in deciduous trees, to about 3300 ft., in the woods between Brünig and Alpbach; *not* in the woods down the slopes from Engelberg to the level valley, but this was early in the afternoon, and all birds seemed very silent; in orchards near the woods at the side of the valley at Stansstad. I did not see or hear a Willow Wren in Switzerland, but they were almost silent when we left England. Mr. Fowler has observed it at Meiringen.

Acrocephalus steperus, Reed Warbler. — One in the hotel garden at Stansstad came and sang its characteristic "churra churra churra" as we sat under the cropped chestnuts. It was perhaps breeding somewhere among the lilacs and other shrubs. We had in the morning been observing and listening to the song of the Marsh Warbler: the many points of difference between the two birds is very striking.

A. palustris, Marsh Warbler. — The Marsh Warbler seems to be the common "river warbler" here. Between the lakes of Thun and Brienz lies a fine stretch of ground (the Bödeli), rather marshy in places, in others drained by ditches. In June it was covered by short hay-grass, gay with beautiful flowers, sainfoin, yellow rattle, bird's-foot trefoil, viper's-bugloss, the deep violet spikes of a plant of the dead-nettle tribe, so common in Swiss hay-pastures, and fine spikes of *Orchis incarnata*, varying from deep purple to rose-pink. Here and there patches of reeds, meadow-sweet, and low alders; narrow, wet ditches grown up

with reeds; and patches of bramble and a thorny, scrubby shrub with narrow, hoary leaves. From a broad, shallow, dry ditch, with some growth of bushes, reeds, and meadow-sweet, I flushed a Marsh Warbler which flitted away with a low grating cry. The nest was built in, and entirely supported by, the stems of the meadow-sweet, about two feet from the ground. It was composed entirely of rather fine dead grass-stems with a lining of finer grasses, and a few long hairs, and contained five fresh eggs. Very remarkable eggs, quite distinct from those of the Reed Warbler; ground-colour white, marbled with grey, lilac-grey, and light greenish brown. We afterwards found another pair, accompanied by their young brood on the wing; these haunted a clump of bushes, and gave us close views of them. On the 19th June F. observed a bird, in good song, about a narrow belt of thick alders between the Aare and some gardens at Meiringen. On the 22nd we visited the spot again, and saw the bird, which had probably hatched its young, as it sang very little. Several times it crossed the broad river to visit some allotment gardens on the other side, and perched once or twice on the top of tall French bean-sticks. It imitated the Sedge Warbler's chatter (a little) and notes of Black Redstart and Tree Pipit. At the east end of the Alpnach arm of the Lake of Lucerne, between Stansstad and Stanz, is a broad tract of flat ground. Near the lake it is simply a drained bog; at the time of our visit only wet in places, but still much overgrown with reeds, and the straight roads through it quaked as a cart rumbled along. Here we found the Marsh Warbler pretty common, and had several good views of the birds, besides listening to the song of three individuals, on the blazing hot morning we spent there. The nest of one pair we watched in a stretch of tall reeds and meadow-sweet (the ground dry underfoot) was built in the stalks of the latter plant, and formed of dead grass-stems, with a lining of finer grasses and a few hairs. It contained only two eggs, rather longer than those in the Interlaken nest, with a white ground, marked only at the big end, and that not very much. Unfortunately, as I was handling one of the eggs, one of the horse-flies, which were very troublesome, bit me, and I broke it. It seems likely that two broods are reared in the season, as this nest was found on the 28th June. The two nests examined were not so deep as that of the Reed Warbler; the sides were fairly thick, but the nest was

very compact, and less neat than that of the last-named species. The Marsh Warbler is not a particularly shy bird. It often takes up a position on an exposed twig, &c., in the attitude of an ordinary perching bird, and does not confine itself to clinging to a reed or other stem, though the males will sing in the latter position. It shows itself more, and does not skulk nearly so much as the Reed Warbler. The birds seem to be even playful sometimes, and we saw two toying together in the air and about the tops of the reeds. The song is quite different to the Reed Warbler's, and is not delivered in the leisurely fashion of that bird. But it is the finest reed-bird song I have heard, very rich and varied. The bird's natural notes seem to consist of some chattering ones like those of the Sedge Warbler, mingled with others resembling the high pipe of the Nightingale, but lower, and the liquid, juggling notes, but less full, of the same bird. This is the only thing I can compare the notes with, but they are delivered in a different way. The birds at Stansstad also imitated parts of the song of the Swallow, Tree Pipit, and Goldfinch, and especially the call-note of the last named. In appearance the Marsh Warbler is decidedly paler than the Reed Warbler, the head, neck, and rump cold in tint, and in the case of the first two, with almost a grey shade on the brown. A remarkable character is the warm, pale rufous of the wings, which makes them contrast conspicuously with the other parts. I noticed it particularly in all the birds I saw at close quarters. The explanation of it is probably to be found partly in Mr. Howard Saunders' remark that when the plumage is not much abraded the wing-feathers are tipped and margined with pale buff. A specimen in Bern Museum, labelled "Mooseldorf-see," is a very pale bird, with quite a grey tinge on the head.

Accentor modularis, Hedgesparrow.—First seen as it sang on the top of a pine below me in the higher pine woods near the Magis-alp (about 4500 ft.); one observed, in song, on edge of Engstlen-alp (6000 ft.); and another just below the hotel on the Trubsee (about 5800 ft.). Quite a mountain bird in Switzerland. As showing its tendency to this character, even with us, I may mention that I have seen it on bare rocky ground on a Welsh mountain, at between 1200 and 1500 ft. elevation.

A. collaris, Alpine Accentor.—One seen and heard singing as it flitted about the cliff edge or perched its dumpy form on a

projecting fang-like rock, between the Engstlen and Joch Pass. Another there, two days afterwards, and the same morning, when coming down the N.E. side of the pass, we fell in with two pairs. It has been well called the "Alpenlerch," having a habit of soaring up a little way like a true Lark and singing on the wing. It has a curious flickering, dancing, wavering flight. A short, heavy-looking bird, it seems to squat quite down when sitting on a stone. The song, which is delivered by the bird when perched on a rock, as well as when in the air, has sometimes a resemblance to that of the Hedgesparrow; again one hears notes reminding one of a Whitethroat's song when it sings on the wing. There are also notes like "wiche che-ow che-ow," and some which may be syllabled "tay tay tay."

Cinclus aquaticus, Dipper.—A pair were feeding young which could fly, on the banks of the Aare at Meiringen, on the 19th June. I heard one in song there on the 22nd. On both the occasions that I walked through the Aaresbucht I observed Dippers there, even quite in the middle, and I marked one to its nest in a hole in the rock, some five feet above the surface of the roaring torrent. It was pretty to see the old Dippers on the banks of the Aare hawking flies in the air; also quite marvellous to see how they dashed into the river (here flowing with the greatest rapidity and raising white-crested wavelets on its cobalt surface as it rushed along), and allowed themselves to be carried down some yards before rising again. It seemed almost inevitable that they must be swamped. All the adult Dippers I saw at Meiringen, so far as I could see (and I had excellent opportunities of seeing as the birds flew towards me, mounted into the air after a fly, or perched on a stone), entirely wanted the chestnut band on the breast—a fact I was not prepared for; head and neck conspicuously pale, but they looked very dark underneath. Two specimens in a shop-window at Interlaken had the usual chestnut band, and so also had three in the Bern Museum, but in two of the latter it was not at all bright. I saw one in the Engstlen just below the lake where the little river flows rapidly down a pine-clad rocky ravine; this bird was rather pale-coloured, with pale head and neck, and *had* chestnut on the breast, which convinced me that those at Meiringen had not. I noticed a young bird of the year as we walked up the Genthal.

Parus major, Great Titmouse.—Observed at Bern; at Thun,

several; and at Stansstad, where it still had its spring note on the 28th June.

P. ater, Continental Coal Titmouse.—At Interlaken an old bird with a very blue-grey back was feeding young branchers at the east end of the town. I found a nest on the Engstlen Alp in a crevice in the face of a perpendicular rock shaded by a couple of pines at the top of a steep grass slope. By standing on tiptoe I could just get my finger into the crack, and drawing myself up by my hands, could look in. The young birds were partly fledged, and chirped merrily. I was unable to get hold of the one addled egg which lay in front of them. It looked exactly like an average English Coal Tit's egg. The old birds were so excited that I could watch them within a yard of my head. This form is a very clean looking bird, and the blue-grey of the back is conspicuous. This form is in the Bern Museum, labelled "Bern."

P. palustris, Marsh Titmouse.—A bird at Interlaken was very "clean-cut" and neat-looking, and was perhaps the form described as *P. palustris*, for though I think I have seen it stated that Prof. Fatio says this form does not come into the valleys, there is a specimen in the Bern Museum labelled "Lucerne." Several in the pines just below the Mägis-alp (about 4500 to 5000 ft.) were certainly *P. borealis*, grey-looking with large black cap. This form was also observed in the woods near the Brünig Pass.

P. cæruleus, Blue Titmouse.—Observed at Bern and at Thun, where it was feeding young branchers.

Acredula caudata, Long-tailed Titmouse.—We did not see any, and I only mention it in order to call attention to the fact that both this form and *A. rosea* are in the Bern Museum labelled "Bern."

Parus cristatus, Crested Titmouse.—Several in pine woods below the Mägis-alp. It has a very grey appearance, and looks, I think, lighter coloured than the Blue Tit. The erected crest was conspicuous in one which sat on a pine top, calling and excited. It would be more heard than seen in the thick pine woods, with boles hoary with long, shaggy lichen. The note is "seet, seet, seet"; but it has also a sibilant, twittering note. I heard the note in the Brünig woods also.

Sitta cæsia, Nuthatch.—Seen at Thun; in the Brünig woods twice, and in the pear orchards in the valley near Stanz. There is a pretty variety in the Bern Museum, all white except the secondaries and coverts, which are grey.

Troglodytes parvulus, Wren.—The Wren is a bird of rocky

high woods apparently. It was in song in the Brünig woods at the top of the pass. I saw one creeping about the rocks in the woods near Holefluh, and another in the bushes at the top of Pfaffenwand, just by the Trübsee Hotel.

Motacilla alba, White Wagtail.—Observed from the train by the Birs at Münster, in the Jura; at Bienne; about the house-roofs in Bern; at Thun; the house-roofs in Interlaken and Meiringen; young and old by the Aare in Meiringen, at Engelberg (3400 ft.), but not higher, and many in the valley between Wolfenschiessen and Stansstad, and at the latter place. Some observations on the plumage and habits of this species will be found in 'The Naturalist' for 1891.

M. melanope, Grey Wagtail.—I saw one in the Suze, near Sonceboz (2150 ft.), in the Jura, and two others near Reuchenette, from the train. At Meiringen I observed the adults on the banks of the Aare, and in the Gorge of the Aare, also young on the wing on the 22nd June. One observed in the Genthäl, but the pair which F. generally found breeding at the mouth of the Enstlen See were absent; perhaps the long hard winter and late spring may account for this. There was a pair by the ornamental lake in the garden of the Hôtel Titlis at Engelberg, and I saw a bird of this species by the water below the Lion at Lucerne.

Anthus trivialis, Tree Pipit.—Observed at Interlaken; about the Alpbach Hotel, Meiringen, and all up the lower pastures of the Hasleberg, where there were trees up to close to the pines (about 4500 ft.). Singing at edge of pines at the foot of the Pfaffenwand on the Gerschin Alp (about 4000 ft.). Fairly common on the wooded edge of the valley about Stanz.

A. campestris, Tawny Pipit.—When walking along the straight hedgeless roads which intersect the open tract of drained land between Stansstad and Stanz on a blazing hot morning, 28th June, my attention was drawn to a Pipit which was new to me. Its song had some of the notes of, but was inferior to, the Tree Pipit's. It rose from the ground and sang as it returned to it. The ground there consists of hay-meadows, in which the grass was short (perhaps a second crop), and is much drier than that lying nearer the Alpnach branch of the lake. I could not get near this bird from the nature of the intervening ground, but afterwards met with another pair, whose anxiety for a nest of young they evidently had near at hand brought them close to me. They were of this species. The Tawny Pipit is a good-sized

bird, but its tail looks proportionately short; the plain sandy brown of the upper parts is very distinctive. In the male the throat and upper breast is very slightly marked with dark specks, and rather more so in the female; but from specimens I have examined I find that individuals differ considerably in this respect. The young are always more marked both below and on the wings—*e.g.* two Swiss examples in the Bern Museum. They often perched on the single telegraph-wire. Alarm-note, "chit, chit"; song, short, but with a few rather good notes.

A. spipoletta, Alpine Pipit. — A good many pairs on the Engstlen Alp, but according to F. and Anderegg, not so many as usual, a fact which the latter attributed to the severity of the late winter in the valleys; but I do not know whether this species winters in Switzerland at all. It extends on the Tannen-band to about 8000 ft. at least; the lowest elevation at which we saw it was 4000 ft. on the Gerchin Alp, where several pairs were evidently breeding among the tall growth of globe-flowers and large gentians. The song reminds one of the Rock Pipit's, to which I had been listening at Dover,—“zig zig zig zi zi zi zi,” running down and becoming quicker at the end. Sometimes it has a ring in it, when the notes approach “tink tink tink ti ti ti ti.” A short strain was delivered by the bird when sitting on a *Picus cembra* or a big rock, but the full song only in the air. Mr. Scott Wilson ('Ibis,' 1887) speaks of it as “alighting invariably on the extreme top of any tree near,” but I often saw it descend on to a big rock. A bird anxious for its nest will sit as long as you like on a stone or a cedar, and with its monotonous “sic, sic, sic” of alarm. On the Engstlen Alp (in the latter half of June) the the young were probably hatched, from the actions of the birds. Mr. Scott Wilson mentions finding a nest of five eggs on the 10th June the year he was there, and young just hatched on the Furka on the 17th. Some pairs seemed to be nesting among the alpen-roses (just coming into bloom), and the heather in that part of the Engstlen which is studded with large boulder rocks and a few ancient “cedars”; others inhabited rather bare ground, on the grassy and rocky slopes. The adult male is a beautiful bird, very light coloured, with pale grey head, rosy breast, and conspicuous white eye-stripe; the female rather browner. It is a constant singer; we heard the song, near and distant, in brilliant sunshine, wreathing mist, and even heavy mountain rain.

(To be continued.)

ON THE HERPETOLOGY OF THE GRAND DUCHY OF BADEN.

BY G. NORMAN DOUGLASS.

(Continued from Zool. 1891, page 391.)

II. Fam. BUFONINA.

1. *Bufo calamita*, Laur.—Considerably more numerous in the neighbourhood of Karlsruhe than the following species, though less commonly met with during the daytime. The proportion must be about ten *calamitæ* to every four *vulgaris*, and one may frequently count up to twenty of the former before seeing a single Common Toad. The dry soil of the "Hardwald" seems more congenial to it; and the great abundance there helps, possibly, to explain the absence of *B. variabilis*, as it appears that these two tend to exclude each other, and rarely to occur in equal numbers.

The specimens from this district are of larger dimensions than English ones. The colouring is often fairly bright, in consequence of the red tint of the warts on the back (chiefly with the female sex); the fundamental tone varies between dark brown and light greyish-green. Some individuals of the latter form might easily be mistaken in the twilight for *variabilis*, especially as the dorsal groove is here not so clearly defined.

The possession of these spinal lines, or stripes, is a common trait with vertebrate animals—*cf.* many of the Mammalia; the vertebral zones and crests in lizards, newts, and in the embryonic stage of fishes, of which latter a rudiment is retained throughout life by the *Salmonidæ*; and, being traceable to the earliest condition of all vertebrates, possesses a deeper morphological significance than the other markings.

The Natterjack is found, I believe, in every other part of the Grand Duchy, as well as in all the neighbouring countries. Its range does not extend so far south or east as that of *B. variabilis*. In the Palatinate it is reported as "not very common:" I captured a single specimen, in broad daylight, near Wörth on the Rhine.

2. *B. vulgaris*, Laur.—This is, together with *Rana fusca*, the most widely diffused batrachian of Baden, being found in every altitude and situation.

In point of size, it seldom exceeds medium dimensions, and never attains the vast proportions of some Swiss or Austrian, to say nothing of Italian, specimens. As with other species protected by obscure colours, there are here no marked varieties. Some

individuals may be found indistinctly striped (not so frequently as in England or Scotland); in others the excrescences on the back are of an unusually dark brown tint.

Towards the middle of April there are generally one or two pairs in the fountain of the Schlossgarten, and other ponds near Karlsruhe; while large numbers congregate in more suitable localities, such as that mentioned in the account of *R. arvalis*. In the Black Forest I have seen them in pools of melting snow, and it reflects credit on their constitution that they can survive a prolonged immersion into water of the temperature of ice. But most recently it has been shown that though frozen into solid blocks, their ultimate recovery is ensured, if a slow and judicious process of thawing be adopted.

There is some fluctuation in the numbers of this species: in some years it is comparatively rare, in others exceptionally common. The latter was the case in 1887. A similar periodical abundance has been recorded with other anurous batrachians, and may be attributed in chief part to moist weather favouring the development of the spawn at the critical moment. For whereas one or two species display considerable forethought in selecting deep water to deposit the spawn, others are most improvident in this respect,* and content themselves with the first piece of water that comes in their way. Hence large quantities of spawn must perish annually, if a sudden drought sets in.

Occasionally, in dry weather, batrachians will undertake journeys across country in search of water. I have noticed this principally with *Bombinator bombinus*, which, through establishing itself in the most shallow and ephemeral puddles, is often obliged to change residence. An emigration of *Rana esculenta*, on a more wholesale scale, has lately been recorded, and, according to an American journal, there can be witnessed, in Dakota, an annual procession of frogs marching from the Red River (winter quarters) to the prairies in summer, and back again in autumn.

* It is not surprising to find this same lack of intuitive instinct with birds. As an instance which has come under my own observation:—During a spell of unusually fine weather, a number of Reed Warblers on the River Alb, near Karlsruhe, were tempted to build their nests long before the reeds were of sufficient height. The consequence was that they were all destroyed by a sudden flood, with one exception, where the bird heroically hatched its brood, though the nest was covered with thick mud. In this and most cases the catastrophe was unexpected; in others it appears as if repeated sad experience will not effect the discontinuance of a habit formerly justified.

The quantities of small frogs and toads sometimes seen covering a large extent of ground has given rise to the notion that they have been rained down from the clouds, whereas, in all probability, the explanation given long ago by Roesel is the correct one, *viz.*, that a sudden rainfall has caused them to quit the fissures of the ground, where, before, they had been sheltering from the dryness. In an old work of the seventeenth century, by one Gasparus Schott, a Jesuit professor, the author gives his views on the subject:—"Ranas ex putre pulvere* & imbre nasci notum est omnibus, ut ipsemet non semel vidi"; and, later on, "Cum ipsâ subinde pluvîâ decidunt, in nubibus generatæ. Testes habeo oculatos, imò et oculos meos!" But he does not always trust to his own powers of observation. Thus, after discussing at great length the vexed question whether the Salamander can exist in fire, and weighing the probabilities on either side, he comes to the conclusion:—"Salamandra *aliquamdiu* in igne vivit,—at deinde moritur."

It has been observed that the young of this and other nocturnal batrachians display much more agility, in various ways, than the adults. When it is found that, in addition to this, they lead a diurnal—*i. e.* more natural—life, we are led to consider whether the ancestors of the race have not been forced, in the course of time, to assume their present concealed habits, presumably for the sake of protection. The colour affords further confirmation of this hypothesis: there has been a simultaneous acquisition of nocturnal tints in place of the original brighter ones now confined to the immature condition. Their present sedentary mode of existence has therefore resulted in a partial muscular atrophy, similarly as unwonted exercise will induce hypertrophy of parts.

In this and many other instances a more systematic study of the ontogenetic development would doubtless yield much evidence of the gradual differentiation, through increased use or disuse, of allied races. This is certainly one of the most fertile provinces of Natural History, and, being comparatively unexplored, offers special attractions to the biological speculator. It is seen that the young of many species possess a greater variety of capacities,

* This is akin to the idea expressed by some peasants in the Auvergne, who, misled perhaps by external resemblances, imagine that the Viper is formed spontaneously out of the dung of horses and cattle.

a more diversified adaptability, than the adults. At the same time the young of forms highly specialized often do not exhibit, to any pronounced degree, the distinguishing features of their parents.

Clearly, under changing external conditions, some amount of flexibility during growth is as essential to the species as it is to the individual. This flexibility differs both as to degree and direction (quality), and is manifested in what may be called their respective characteristic tendencies. Having attained maturity, the race, like the individual, has become more specialised in its mental and physical constitution. But the acquired comparative rigidity, while affording protection against temporary shocks which might have proved fatal during growth, constitutes in itself the primary cause of incipient decay.

3. *B. variabilis*, Pall. — Much remains to be done before the distribution of this species in the Grand Duchy is anything like accurately determined. Judging by the accounts from the countries surrounding Baden, whose Herpetology has been more thoroughly investigated, we should expect it to be pretty universally distributed here, as it occurs, more or less abundantly, in all of them.

I have been unable to find it in the vicinity of Karlsruhe, and should be careful in crediting statements of its existence not capable of ocular demonstration, as there is much confusion between this and the two foregoing species. It is said to occur as near the capital as Ettlingen (five miles south), and again at Heidelberg; Leydig cites it from Weinheim in the north.

In the Palatinate *variabilis* appears to be very common near, and in, the towns of the Rhine Valley. It has been recorded from every part of Germany, though it seems to be absent, or very rare, in certain districts.

I was surprised to come across this species in the island of Lipari, during a short stay there in the early spring of this year. The tadpoles were abundant in the three rivulets of warm mineral water which run down to the sea on the western part of the island (Prof. Giglioli has kindly written to say that he also found it there in 1878). How it reached this volcanic island, destitute of fresh springs, and has succeeded in establishing itself there, is at present a mystery.

At the time of my visit all animal life was very poorly represented, owing to the stormy weather; still I venture to append

what I was able to observe in the way of Herpetology.* The lack of accommodation in these islands is the chief drawback to tourists; and I will take this opportunity of again thanking Mr. Narlian, of Lipari, for his kind hospitality during my stay there.

(To be continued.)

NOTES AND QUERIES.

MAMMALIA.

The Marten in Norfolk and Suffolk.—Referring to Mr. Harting's criticism of the opinion I ventured to express (*Trans. Norf. and Nor. Nat.* iii., p. 668), that the recent examples of this species obtained in Norfolk must be regarded as "escapes," and to my suggestion that it was possible—as in the case of the Irish Martens which had escaped from confinement in the South of England—for these accidental liberations to happen without the fact being suspected, I fear that I have been misunderstood, as it certainly was not my intention to imply that the isolated occurrences here met with were individuals which had escaped in the South of England. I merely mentioned that circumstance to show such a thing had occurred, and that a parallel case might happen here quite unsuspected. That the Kelling and Hevingham Martens were not native Norfolk animals I think Mr. Harting's remarks go far to render probable, for I quite agree with him, to use his own words, that "there are so many keen naturalists and observant sportsmen in Norfolk that it would be very difficult for any escaped Martens to be at liberty without the fact becoming speedily known," and that is precisely what I believe happened in the cases referred to; how much more

* Of snakes, only *Zamenis viridiflavus* was observed on Stromboli and the islet of Basiluzzo (the young already decidedly *carbonarius*), but it undoubtedly also occurs on the larger islands of Lipari, Vulcano, Salina, and Panaria. Light-coloured ones—*Tropidonotus*?—are reported to exist on Lipari.

[The colour-perception of the islanders is not highly developed. Anything light is *bianco*, dark *nero*.]

L. muralis tiliguerta, dark on Stromboli and Vulcano, light on Lisca Bianca; varying according to the soil on Lipari, where a fine *rubriventris* race may be met with near Bagno Secco. I could not detect it on Lisca Nera, which, I was afterwards told, is swept over by heavy seas; but the hazardous climb up this rock was rewarded by the discovery of a nest of *Larus cachinnans*, Pall., on the summit. The most brightly coloured and largest *muralis* are to be seen on Panaria. Curious to say, this lizard is less shy in the neighbourhood of villages than on the larger islands off the beaten track, and quite unapproachable on the small islets.

Panaria seems also to be the Eldorado of geckos (*Platydictylus*), where in summer their numbers are said to be quite appalling. They are known as "Salamide," and are reputed highly poisonous. This species occurs on all the larger islands, while *Hemidactylus verruculatus* exists on Basiluzzo, Dattilo, and, presumably, all the other islets.

unlikely would it be that the creatures were survivors of the old Norfolk race. The only way of accounting for their presence, therefore, is to regard them as "escapes," and very recent ones, too, I believe. With regard to the late Mr. Gurney's communication printed in vol. ii., pp. 273-4, of the 'Transactions of the Norf. and Nor. Nat. Soc.,' he distinctly says the source of his information was "a cutting from a newspaper of the year 1811," then in his possession; he therefore quotes from a contemporaneous local record, and if coincidence of date has any weight the preference should be given to this statement rather than to that in Daniel's 'Rural Sports,' published two years later. I certainly was aware of Daniel's reference to the same occurrence, and doubtless Mr. Gurney was also, but he evidently wished to reproduce a local version. This is not the only discrepancy between the two accounts, for the latter gives the number of Stoats killed as 416, whereas the former mentions 446. Sir Ralph Gallwey quotes this same list in his book on 'Field and Covert' shooting (Badminton Library), p. 18, and differs from Daniel's numbers in three instances, and from Mr. Gurney's in two; but with regard to the number of Martens no two are alike, Mr. Gurney giving the number as 43, Daniel 3, and Sir Ralph Gallwey 9. They cannot all be right, who shall decide between them? I would suggest that the smaller the number the more likely it is to be correct. The Kelling Marten is now in the possession of Capt. Bird's son, the Rev. Maurice C. H. Bird, of Brunstead Rectory.—T. SOUTHWELL (Norwich).

Albino Squirrel.—A beautiful albino Squirrel, which had for some weeks past been seen in our garden and the adjoining plantations, was, on the afternoon of Nov. 23rd, caught by a retriever, and brought to my brother, Mr. Bertie Matthews. It was a female, of a pure white, without any mark of the usual colour; its eyes were entirely of a transparent rosy pink.—A. MATTHEWS (Gumley, Market Harborough).

The Polecat in North Wiltshire.—I do not think that the Polecat, *Mustela putorius*, is by any means extinct in North Wilts. Two instances of its occurrence have come under my observation. About fifteen or twenty years ago a boy killed one in the parish of Hardenhuish, near Chippenham, where the stuffed skin is still preserved in a cottage. During the severe winter of 1890-91 another specimen was secured in the same neighbourhood. The animal, evidently half starved, had crept into a fowl-house in the outskirts of Chippenham, where it was discovered and killed.—A. G. HEADLEY (Portchester).

The Polecat in Northamptonshire.—On September 26th ult. I received a letter from Mr. Percy Mitchell, of Cranford Hall, Kettering, in which he informed me that a Polecat had been caught in a trap at that place, by his gamekeeper, a few days before the above date.—LILFORD (Lilford Hall, Oundle).

CETACEA.

Bottle-nosed Dolphin on the Lincolnshire Coast.—A small specimen of *Delphinus tursio* was washed ashore on the Lincolnshire coast, at Marsh Chapel on the 5th November last. It was evidently a young animal, barely measuring seven feet in length, but was too much decomposed to note the colours. I do not think that the Bottle-nosed Dolphin is by any means a rare species in the Humber, and I am quite convinced that I have seen it on several occasions. In August, 1888, two of these animals came up Tetney Haven, and allowed themselves to be enclosed in the lock, where they were both shot. One measured 11 ft. in length, the other 8½ ft. This occurrence was recorded in 'The Naturalist' at the time by Mr. Cordeaux. About the same time H. Stubbs, the well-known wildfowler, told me that three other individuals of the same species were stranded near Tetney Haven. These unfortunately were cut up or removed before I heard of them; but I have no doubt of their correct identification. I possess the skulls of those killed at Tetney, and the entire skeleton of the Marsh Chapel specimen is being preserved for me by Jeffreys, of Great Grimsby.—C. H. CATON HAIGH (Grainsby Hall, Grimsby).

BIRDS.

Feeding Wild Sea-Gulls, Jackdaws, and Pigeons.—A correspondent of the 'Western Morning News,' writing from Gurnard's Head, Cornwall, Aug. 27, 1891, under the initials J. W. B., says, "A tame Gull will come for its dinner to a rock a few yards from the house when whistled for. On the same rock during the winter time Jackdaws were in the habit of coming on the same signal being given. When the Gulls began nesting I surmise the Gull was attracted by the evident enjoyment of the Jackdaws, and one was not long in making an attempt on the citadel, at first very cautiously, but now has lost all fear, and not only comes daily, but brings her three young ones with her. Should the signal be delayed, they will come on the rock and cry out, the young ones especially. On my taking them some scraps (they will eat anything, and with an avidity only equalled by the Pelican) they circle round, and on my standing a few yards away will alight and begin their repast. On wet days they will circle round the balcony of the house and utter cries to attract notice. Before the Jackdaws left for the harvest, as they invariably do, I one day placed some food on the rock; the Gull took possession, and was immediately surrounded by half-a-dozen Jackdaws, none of whom dared venture on the rock, but sat at its base whilst the Gull devoured her dinner in the most leisurely way. The fisherman in the cove has also a tame Gull which, on his return from sea, will alight on the water and wait patiently for any fish thrown to it. It was attacked in the most savage manner the other day by another Gull, which did its best to try to drown it. As far as regards forecasting weather, the

Sea-Gull is more reliable than any glass. I may also state that there are about fourteen Wild Pigeons living in the crevices of the rocks opposite. They come daily, at daybreak, and sit on the roof till fed, when they vanish until next day. When the 'corn is cut I do not see them so often, but they turn up as soon as harvest is over. There are also a pair of Ravens which have a nest annually on the cliff at a loftier range than where the Pigeons reside, and will come to an old mine shaft and appear grateful for any scraps. The solitariness of the place, it is believed, is the cause of their docility."

Rough-legged Buzzard in West Sussex.—On Oct. 29th a Rough-legged Buzzard, *Buteo lagopus*, was shot near West Harting Pond. It proved to be a female, measuring 23 inches, with extent of wing 54 inches, and weighed 2 lbs. 5 oz. It was forwarded to Messrs. Pratt, of Brighton, for preservation.—H. D. GORDON (Harting Vicarage, Petersfield).

[Observers in other parts of the country have remarked an unusual number of Rough-legged Buzzards in October and November. Half-a-dozen were killed in various places in Suffolk; the last heard of was trapped on Mr. Deek's farm at Westleton, on Nov. 28th. In Lincolnshire one was killed at Sutton on Nov. 19th; this bird was reported to have measured 4 ft. 7 in. across the wings.—ED.]

Sabine's Gull near Bournemouth.—An adult specimen, in winter plumage, of Sabine's Gull, *Xema Sabinii*, has recently come into my possession. It was found dead in a field near Bournemouth, on Oct. 13th, 1891, during the prevalence of S.W. gales. As recently killed mature examples of this Gull are rarely met with, perhaps the following observations will be useful:—Tibia, tarsus and toes, also webs, pale drab colour, with a shade of umber at the joints and on the webs. Nails dark umber. Bill from base to a little beyond nostrils black, remainder straw-yellow. Gape, and inside mouth and throat, bright reddish-orange. Tongue pale orange-yellow. Eyelids black. Irides dark hazel. The measurements of the body and wings agree with published descriptions, and need not be repeated. The plumage on the whole of the under parts was beautifully suffused with salmon-pink, which was observable for several days after the bird had been skinned and mounted. The white tips to the black primaries have a twisted and worn appearance. The tail is not so acutely forked as shown in Yarrell's figure, while the sharp angle to the lower mandible was not at all observable in the fresh bird, but is beginning to appear as the bill dries.—F. COBURN (7, Holloway Head, Birmingham).

Sabine's Gull in Cornwall.—A specimen of Sabine's Gull was shot by Mr. C. Vingoe, at Newlyn (West), about the middle of October last.—T. H. CORNISH (Penzance).

Ornithological Notes from Worcestershire.—On the evening of July 4th, 1891, I saw two Curlews, *Numenius arquata*, fly over my garden at King's Heath. They were making direct for Cafton or Bromsgrove. I have upon two previous occasions seen Curlews in this district during the summer time. The keeper of Cafton Reservoir, near Bromsgrove, tells me that Curlews are of fairly frequent occurrence there during the summer months, and his observations have been supplemented by information I have received from a gentleman living near the Reservoir. Does not this suggest the possibility of the bird nesting in this district? The high heath-land on Lord Windsor's estate would be a suitable spot. The Wheatear, *Saxicola ænanthe*, is a decidedly rare bird in this district, and its occurrence is well worth recording. On August 16th, 1891, I saw two young specimens in a meadow at King's Heath, near my own house. In September, 1890, I saw one adult at exactly the same spot. I have once received this bird from Bromsgrove (fifteen years back), and once also from Quinton (about four years ago). An adult female Ring Ouzel, *Turdus torquatus*, was shot at Quinton on the 28th October, 1891. On April 17th, 1891, I secured a fine adult male, with the head largely speckled with white, shot at Northfield; both in Worcestershire. A female Merlin, *Falco æsalon*, nearly adult, was caught in a net at Black Heath, Worcestershire, on Nov. 4th, 1891. This bird is now a rare visitor to us.—F. COBURN (7, Holloway Head, Birmingham).

Ground-building Birds removing Egg-shells.—Referring to the remarks on this subject by Mr. F. M. Ogilvie (Zool. 1891, p. 445), the Whaup, or Curlew, *Numenius arquata*, makes an open nest, and does not remove the egg-shells immediately the young are hatched. On the evening of May 19th, 1891, I found a nest of this bird. I took one of the four eggs, which was quite fresh, and continued to watch the nest. On June 18th, the thirtieth day after finding it, I noticed one egg chipped in the morning. I re-visited the nest in the middle of the day, and heard the young chick squeaking inside the shell. On my third visit, at night, the down-covered youngster was sitting—though barely able to do so—in the nest beside the other two eggs and the empty shell. This latter I took up, and observed that it was not broken in two parts (like a Partridge's egg, for example), but that the bird had come out at the larger end. The young bird made a faint squeaking while I was looking at it. On the following morning I found the young bird two or three yards from the nest. I replaced it, but it ran out again. In the afternoon I again saw it further off than before. The old bird sat two days longer on the other eggs (which were both rotten) before leaving them. On Sept. 5th, after the Whaups had all left the moors, I came on one of their nests, for which I had looked in vain in the summer, with the bits of egg-shells lying in and near it.—ROBERT GODFREY (46, Cumberland Street, Edinburgh).

The Stone Curlew in Kent.—A few years ago the Stone Curlew, or Thick-knee, *Edicnemus crepitans*, was comparatively common on the great shingle wastes in Kent. Now, by reason of railway extension and the consequent opening out of formerly lonely districts, it is virtually extinct. An odd pair or so still lay their eggs on the shingle; but during the last five years I have not known a single pair to elude the grasp of the 'long-shoreman or loafer. This bird is locally known as the "Nighthawk," from its well-known nocturnal habits. The Thick-knee usually lays its eggs on the fine shingle close to the edge of some dead patch of gorse or broom, but rarely or never on the earth or grass adjacent. The fishermen and others declare that these birds have a habit of rolling one egg away when they leave their nest, so that, in the event of one egg being discovered, the other may possibly escape. I have never seen this operation performed, but have found the eggs some distance apart. It is a matter of great regret that these interesting birds should be thus hurried out of existence in Kent.—WILLOUGHBY VERNER (Capt. Rifle Brigade).

The Kentish Plover.—This bird, like the Stone Curlew, or Thick-knee, is being rapidly exterminated in the county from which it derives its name, by collectors and so-called "naturalists," who, with walking-stick guns, in and out of season, destroy all they can approach. These gentry do more harm even than they imagine, for I have come across many small plovers and other birds which have been ineffectually "peppered," and have gone away to die. Still oftener I have found nests of the Ringed and Kentish Plovers which have been trampled on by these uncouth marauders in their clumsy and ever eager attempts to "annex" everything they can in the least possible time.—WILLOUGHBY VERNER.

[Why is not the "Wild Birds Protection Act" put in force? Protectionists were very clamorous to get this Act passed, and now that the Legislature has acceded to their demands they take no steps to see it enforced.—ED.]

Late appearance of Hirundinidæ in North Norfolk.—The Swallows, Martins, and Sand Martins that pass the summer in this neighbourhood seemed to leave about their regular dates, but there was an unusual re-appearance of all three species during the month of November, 1891. Mr. Alexander Napier, of Holkham, gives me the following records observed by himself:—Nov. 10th, two Swallows, near Wells. Nov. 11th, two Swallows, Holkham village. Nov. 17th, a single Swallow, Holkham village; and on Nov. 19th, several Martins in the same place. Mr. Henry Lee Warner observed both Martins and Sand Martins about the sheltered grounds of Walsingham Abbey on Nov. 13th, about twenty of each species; the Sand Martins remained till Nov. 18th, and the Martins till Nov. 20th. On Nov. 14th I observed some twenty Martins circling over the village of

Little Walsingham; the day was bright and warm. Miss Hamond informs me that she saw a Swallow at Twyford Hall on the 17th November.—H. W. FEILDEN (Wells, Norfolk).

Albinos and White Varieties.—The following extract may satisfy Mr. J. Jenner Weir with reference to the albino Twite (Zool. 1891, p. 358):—"Ballymena, 9 Oct., 1891. . . . You asked the question when I brought the bird under your notice, and after I had the conversation with you I saw the bird *alive*, and had it out of the cage in my hand. Its eyes were pink. . . . Robert A. Simms." Respecting the phrase "as in all albinos," I hold (with I believe naturalists in general) that unless a white animal or bird has the eyes (iris) pink, it is to be regarded as a white variety, and not as an albino. I wrote to Mr. A. D. Bartlett, Superintendent of the Zoological Gardens, London, on this subject, and his reply is embodied in an interesting note which he has since sent to 'The Field' (Oct. 17, p. 581), and from which I extract the following:—"A perfect albino is an animal entirely destitute of colouring pigment: in fact, the only colour in its composition is flesh and blood; consequently animals thus composed, if covered with hair or feathers, are white, their skin flesh-coloured, and their eyes pink." I also wrote to the Directors of various Continental Zoological Gardens which I recently visited, and have received some interesting information. Herr Adolf Schoepf, of the Dresden Gardens, has sent me an account of an albino Halsbandbär (*Ursus malayanus*), and from his remarks it is evident that he also is of the opinion that a white animal is not an albino unless its eyes are pink. He writes:—"On the 21st February the little white Bear opened its eyes for the first time; it was then apparent that it was an albino, for it had pink eyes." In my note (Zool. 1891, p. 317) I mentioned that three albino Twites were produced from one nest. Herr Schoepf tells me that he has at present, living in the Gardens at Dresden, four creamy-white Blackbirds obtained from one nest, all having pink eyes. In addition to these he has (with pink eyes) *Ruticilla tithys*, *Sturnus vulgaris*, *Pica rustica*, *Corvus monedula*, and one white example of the latter without pink eyes. The following embraces the information received from other Gardens with regard to white specimens:—Rotterdam: with pink eyes, *Cavia cutleri*, *Mus musculus*; without pink eyes, *Sturnus vulgaris*, *Pica rustica*, *Corvus monedula*. Hamburg and Berlin: without pink eyes, *Corvus monedula*.—EDGAR R. WAITE (The Museum, Leeds).

Spotted Eagle in Suffolk.—We have recently (Nov. 21st) set up a specimen of the Spotted Eagle which was shot at the Sudbourne Hall Estate, Wickham Market, Suffolk, and has been sent to us for preservation by Mr. J. J. Hornby. It proved on dissection to be a male, and its stomach contained the remains of a water rat and a partridge. It was killed on Nov. 4th. Another bird had been seen in its company, and is

probably the one that was caught alive at Colchester, as recorded by Mr. H. Laver (Zool. 1891, p. 470). The bird sent to us was in perfect plumage, beautifully spotted, and evidently in its second year; it weighed 3½ lbs.—PRATT & SON (11, North St. Quadrant, Brighton).

Grey Phalarope in Leicestershire.—A Grey Phalarope, in winter plumage, was shot on Oct. 16th, near the Saddington Reservoir, in this county, by Mr. E. T. Turner. It is now in his collection.—A. MATTHEWS (Gumley, Market Harborough).

Grey Phalarope and Arctic Tern in Warwickshire.—On October 20th, 1891, the south-westerly gales were probably responsible for blowing a specimen of the Grey Phalarope, *Phalaropus fulicarius*, to Bentley Heath. I have heard of others in this district. On the 15th of the same month an adult male Arctic Tern, *Sterna macrura*, was found on the grass in Edgbaston Park, within the boundaries of the city of Birmingham. The poor bird (an unusually small specimen when compared with others) was quite exhausted, and was brought to me alive. A considerable flight of the Common Tern (*Sterna fluviatilis*) passed over the Midlands during the middle of August, 1891. Some thirty or forty were seen at Bracebridge Pool, Sutton Coldfield, Warwickshire; several (some of which I received, at Earlswood Reservoir, in the same county; and a good number reported to me from Crofton Reservoir, Worcestershire.—F. COBURN (7, Holloway Head, Birmingham).

Grey Phalarope in Ireland.—I see, by notices in various English papers, that Grey Phalaropes have been seen in various parts of England. The following Irish occurrences have come under my notice, all in October. On the 3rd a male was shot on Lough Neagh, and a female was obtained on the 18th on the northern shores of the same lough. One was procured at Greencastle, Co. Donegal, on the 10th, and a second was captured alive at the same place on the 16th. One was sent up from Carlow on the 23rd, and another on the 26th, both males. A male and a female were shot in Dundrum Bay, Co. Down, on the 26th; and a female at Annalong, Co. Down, on the 16th. Mr. R. M. Barrington writes me that four were received by him on the 23rd, from Killybegs, Co. Donegal; two from Rathlin O'Birne, in the same county, shot on the 12th; and one from Slyne Head South, Galway, shot on the 6th; while in 'The Field' of November 2nd one is recorded from Donegal Bay, shot on the 16th. It will be noticed that, of the seventeen here recorded, nine are from Co. Donegal.—ROBERT PATTERSON (1, Windsor Park Terrace, Belfast).

Hobby preying on Swallows.—In September, 1890, a young friend of mine, who is particularly interested in bird-life, told me that on several occasions he had watched the Swallows as they came in the evenings to

roost in the reed-beds by the river-side, and that invariably a small dark-coloured Hawk was to be seen somewhere about the neighbourhood at the same time, and that more than once he had seen it "strike" a Swallow and make off with it. During the past autumn he observed the same thing; and one evening he saw the Hawk sitting upon an old willow-stump, amongst the reeds, almost close to the water, and from his description I concluded it was a Hobby. On the 23rd of September last I was somewhat vexed that my supposition as to the species had apparently been verified, for a wildfowl shooter brought me a small Hawk for identification, which he had killed at the very spot the previous evening. It was a small male Hobby, but in a very wet and mutilated state, as it had fallen in the water when shot, and could not be found at the time. It is possible that this was the same bird that had frequented the reed-beds a year previously. Does the Hobby migrate in the same direction as the Swallows, and, if so, was this bird following the flocks to a warmer climate, thus ensuring food and companionship on the journey? I recollect the time when this handsome little falcon was not so scarce in the New Forest as it is now; when its chase after the dragonflies over the ponds, or its rapid dart after the dor beetle booming away into the increasing dusk, showed how active it could be when necessary; but these interesting scenes, and others of a kindred type (especially with regard to the British Falconidæ), are, I fear, rapidly becoming "things of the past."—G. B. CORBIN (Ringwood, Hants).

Great Northern Diver off Brighton.—I received lately a fine specimen of the Great Northern Diver, *Colymbus glacialis*, which was taken near Brighton on Dec. 9th. It had only half completed the change to winter plumage.—H. SWAYSLAND (Brighton).

Baillon's Crake in Hertfordshire.—On Oct. 24th I shot a specimen of Baillon's Crake, *Porzana Baillonii*, on the marshes near Cheshunt, which were flooded at the time. It was in good plumage, but rather thin. It is in the hands of Mr. Rowland Ward for preservation, by whom it was identified. Is not the occurrence of this bird so near London rather unusual?—W. H. M. AYRES (Oakville, Holly Park, Crouch End),

[We have no record of the occurrence of this species in Middlesex; but a specimen of the Little Crake, *Porzana parva*, Scopoli, was obtained many years ago on the banks of the Thames at Chelsea.—ED.]

Rare Birds in North Devon.—I have lately received from Barnstaple some birds which were obtained in the estuary of the Taw at the time of the severe October gales. They include two species—the Dusky Redshank and Buffon's Skua—which I have not before been able to add to the list of North Devon Birds. The specimen of Buffon's Skua is almost in adult plumage; the breast and throat are white barred with ash-grey, instead of being pure white, and the grey mantle has some of

the feathers still margined with a darker shade; in the length of the tail, which is fully ten inches, the bird shows its close approach to the fully adult state. There would appear to have been several adult Buffon's Skuas about the river when this specimen was procured, and I have been informed that they were called locally "Fork-tailed Petrels." Two Manx Shearwaters, and a Great-crested Grebe, the last in almost mature plumage, have also been sent to me. — MURRAY A. MATHEW (Buckland Dinham, Frome).

Petrels and Phalarope in the Isle of Man.—Referring to the recent occurrence of many Petrels in Ireland (Zool. 1891, pp. 468, 469) I may mention that, being at Peel on the evening of Sept. 27th, I saw two in the bay of that town. They were flying backwards and forwards near the shore wall, dipping to the surface of the water in their characteristic way, and coming so close that I could distinctly see the thin light-coloured line across their wings. As the town houses extend all along the beach, the birds attracted a number of boys, who threw stones at them and quickly drove them away. About the same date a Petrel was procured in the south of the island. I cannot say positively whether these belonged to the Stormy or Fork-tailed species. In November a Grey Phalarope was picked up on the Peel railway line near Union Mills, $2\frac{1}{2}$ miles inland from Douglas. It seemed to have been killed by striking the telegraph-wires. — P. RALFE (4, Queen's Terrace, Hawarden Avenue, Douglas, I.M.).

Grey Phalarope in Devon.—During the months of October and November last, large flocks of Phalaropes were seen all along our coast, driven here probably by the S.E. winds which raged violently during the former month. Hundreds of these birds were seen by Mr. E. A. S. Elliot at Milton Sea and Huish Sea, on the South coast; and in a letter which I received from that gentleman he states:—"It was a sight never to be forgotten, as I stood on the shore watching these birds." At Exmouth also they appeared in flocks, and, on paying a visit to the taxidermist in that town, I was shown some twelve or fifteen specimens which had been brought in for preservation. The last great immigration of these birds to Devon appears to have been in the year 1870, but almost every year a few stragglers are seen. — WM. E. H. PIDSLLEY (Exeter).

Red-necked Phalarope in Ireland.—On the 13th November last I received a female specimen of this bird, *Phalaropus hyperboreus*, shot by Mr. J. Haire, of Loughgilly, Co. Armagh. When first observed it was "going round like a wheel on the water." I believe this is the first recorded Irish occurrence. — E. WILLIAMS (2, Dame Street, Dublin).

[In his 'List of Irish Birds' (1885), Mr. A. G. More remarks (p. 20):—"The Red-necked Phalarope, which breeds in several parts of the West of Scotland, has not yet been found in Ireland, though it might well be

expected to occur." The present announcement, therefore, is of much interest to ornithologists.—ED.]

Nesting of the Magpie.—In the last volume of 'The Zoologist' (pp. 351, 430) there were notes as to Magpies building in low bushes and hedges. In Norway they nearly always prefer bushes, if procurable. Whilst travelling, in 1890, in the Saetersdal, I observed that—as noticed by Mr. Saunders in his 'Manual of British Birds'—very often the nests were built under the eaves of the houses. In some cases the peasants had placed large props under the eaves for the nest to rest upon; in others the nest appeared to be built half inside the house, between gaps in the timbers. The Magpie is regarded as a bird of good omen, and it is consequently encouraged as much as possible to nest near the houses. In one place I saw, in a low fir-tree close to a house, no less than nine Magpies' nests. I never heard before of Magpies nesting in colonies.—S. A. DAVIES (The College, Winchester).

Raptorial Migrants in East Anglia.—An unusual number of raptorial migrants have appeared in East Anglia during the past autumn. Short-eared Owls have been more abundant than for some years past, and such a visitation of Rough-legged Buzzards has not occurred since 1876. Mr. Howlett, of Newmarket, has had one from Cambridgeshire and four from West Suffolk. One of these was obtained on Nov. 27th in a singular manner:—"A brace of Greyhounds (writes Mr. Howlett) had been slipped at a Hare, and were racing her along the side of a fence, when between them and the hare a Rough-legged Buzzard flew out of the fence. This took the greyhounds so aback that, losing sight of their hare, they dashed at the Buzzard, and one dog, seizing it by a wing, broke it; the bird, however, showed fight, and punished its captor severely with beak and talons until the keeper came up and knocked it on the head." The Buzzard was a male bird, in fine plumage, and seemed to me to be very dark in colour. Two more at least were shot in West Suffolk, one at Troston, about Nov. 1st, forwarded to the National collection, and another at Gislegham. Mr. Travis, of Bury, showed me the latter bird in the flesh, on Nov. 25th; side by side with it, on his counter, was a female Hen Harrier, shot near Newmarket. The rich fawn and creamy tints of the freshly-killed Rough-legged Buzzard were most beautiful, but they had considerably faded when I saw it again a week later, after it had been skinned. The change was so marked that I was reminded of the difference between a half-open "Gloire-de-Dijon" rosebud and the fully expanded flower. A handsome young Peregrine, which came into my possession, was caught in a trap near Bury on Nov. 17th. But the most noteworthy visitant last autumn was a male Spotted Eagle, shot at Sudbourne, in East Suffolk, on Nov. 4th, of which full particulars were given in 'The Field' of Nov. 28th.—JULIAN G. TUCK (Tostock Rectory, near Bury St. Edmunds). [See Messrs. Pratt's note, p. 25.—ED.]

Buffon's Skua in West Suffolk.—An immature Buffon's Skua was found dead about the middle of November, near Newmarket, on the Suffolk side of the town. It was "very far gone" when picked up, but Mr. Howlett, to whom it was taken, just managed to mount it and make it into a presentable specimen. This bird is only the second of the species known to have occurred in Suffolk.—JULIAN G. TUCK (Tostock Rectory, near Bury St. Edmunds). [This apparently is the bird above noticed by Messrs. Pratt and Son.—ED.]

Nidification of the Bar-tailed Godwit.—So few authenticated eggs of *Limosa lapponica* have been received in this country that I was glad to obtain lately, from a reliable Swedish correspondent, two clutches of four eggs each, especially as they were accompanied by some interesting particulars respecting their discovery. It appears that three years ago a Finnish friend of his heard from the natives that this bird was found sparingly, during the breeding season, on a certain very extensive moor near Kittila; and after several days' search he succeeded in finding one nest. The female bird sat so closely that she did not rise until nearly trodden on, the male meanwhile flying in wide circles round the nest, and drawing nearer as the intruder approached it. Thus ample opportunity was given for identifying both parent birds. Last summer several nests were found, containing, I understand, sixteen eggs in all; two with four eggs, one with two, and two with one egg each. The two with four eggs having come into my possession, I am able to some extent to differentiate them from those of *Limosa melanura*. They are on an average of larger size, though possibly, when more specimens come to hand, this difference may not be found constant. I can only state now that those I have received are as large as the largest eggs of the Black-tailed Godwit I possessed, and more uniform in size and shape. They are different in texture, and more glossy than eggs of their congener—indeed are altogether handsomer eggs, and more like those of the Whimbrel, *Numenius phaeopus*. Although larger than those of the Black-tailed Godwit, they are decidedly of less weight. I tested them against a score of the others; but although some of the latter were much smaller specimens, yet in every instance those of the Bar-tailed Godwit were considerably the lightest. I conclude, therefore, that the eggs I have now received may with confidence be regarded as correctly identified, especially as I am informed that the Black-tailed Godwit is only known to breed in Scandinavia on the island of Oland, in the extreme south, and some 800 miles from Kittila. I may add, in anticipation of enquiries, that the eggs in question have already been disposed of.—H. W. MARSDEN (21, New Bond Street, Bath).

Songs of Birds reared from the Nest.—Mr. Charles A. Witchell ('Zoologist,' 1891, pp. 398-9) says that he "shall be glad to receive notes

relative to bird song." I therefore think it worth while to record a few facts relative to birds which I have at various times reared from the nest. Of cock Nightingales which I reared there is no song to record: one of them (proved after death to be a cock) never sang in my hearing; but was said to have sung splendidly at daybreak one morning when about a year old. A Missel Thrush, which was undoubtedly a cock, invariably sang two notes only, one high, the other low; producing a most melancholy and wearying repetition of sound from morning till night. A Blackbird reared from the nest sang the first line of 'Villikins and his Dinah,' and another sang the first line of a Psalm-tune. A cock Starling sang a jumble of sounds mixed with the guttural call-note of the Missel Thrush. A Sky Lark sang the usual wild song, but introduced into it the song of the Persian Bulbul, which greatly improved it. Chaffinches, unless absolutely isolated, readily pick up the wild song; but if kept in the same room with Canaries, their song is lengthened (and thus improved), though not altered in its character. With regard to Mr. Witchell's remarks anent my Redwings, they might be applicable if the birds had not begun to sing before they had heard my Chaffinches. Even then the scale of the Redwing, though reminding one of that of the Chaffinch, is very different in its tone and rapidity of utterance.—A. G. BUTLER (Beckenham).

Persistent Brooding of the Ringed Plover.—The following remarkable instance of persistent brooding of a Ringed Plover, *Ægialitis hiaticula*, came under my observation during the past breeding season, at St. Anne's-on-the-Sea, Lancashire:—On May 26th, whilst strolling along the beach on the look-out for nests, I observed a Ringed Plover running off in a suspicious manner about twenty yards away on the shingle, and on coming to the spot I found a nest containing four corks,—ordinary beer-bottle corks, which lie about the beach in hundreds. Thinking this the trick of some school-boy I threw the corks away, and gave the matter no further thought. However, three or four days after, passing the same spot, I surprised the bird again, sitting on three corks. I forget whether I threw these away or not. On June 7th I again put the bird off the nest, which this time contained four corks. These I threw away. On July 19th, six weeks later, I visited the place again, and, to my surprise, put a bird off from a nest about two yards from the site of the old one. This contained four corks, one of which I threw away. The first nest was full of sand, and only recognisable by the few fragments of shell which had originally lined it. On July 26th I surprised the bird again upon the nest, finding on this occasion four corks and half a cork. I threw them all away but the half cork, and lay down to watch. In a short time the bird came back and sat on the nest. Some people passing disturbed it and it ran off, soon, however, to come back. This happened several times, until a lady with some

children sat down on a sandhill in full view of the nest, when the bird ran off and then flew away. I marked two corks and dropped them near the nest before leaving. The following day, towards evening, I again visited the nest, put the bird off, and found the two marked corks in the nest and the half cork six inches away. These I threw away, and again lay down to watch. The bird soon came back, and settled down in the empty nest for a short time. Soon, however, it got up again, and after this seemed uneasy, as it would stay in the nest for a minute or two, then run away a short distance, only to return. This was repeated several times. As it got too cold to watch I went away, leaving two or three corks near the nest. There was a heavy storm of wind and rain on the night of the 28th, and on visiting the spot once more, on the 29th, I found nothing but a few fragments of shell to mark the spot. I left St. Anne's on the 31st, and did not return for two months. During my various visits to the spot, which were made at all hours of the day, I never once observed anyone at the nest, and cannot help thinking that the bird itself put the corks in the nest—at any rate after they had been thrown away once.—FRANK BROWNSWORD (St. Anne's-on-the-Sea, Lancashire).

[In the article on the "Nesting habits of the Ringed Plover," which appeared in 'The Zoologist' for December last, a misprint occurred which should be corrected. On p. 447, line 32, for "deep holes apparently *found* by the birds" read "*formed* by the birds."—Ed.]

Additions to the Avifauna of Donegal.—The following species may be added to my List of Donegal Birds: they have been reported by Mr. D. C. Campbell, of Ballynagard House, Londonderry, and were obtained during the storms of the first ten days of October last:—

Roller, *Coracias garrulus*, Linn.—One was shot by Mr. John M'Connell on Burt Level Slob, Lough Swilly, on October 10th. This is the bird recorded by Mr. R. Patterson, p. 33. The species has occurred five or six times in Ireland, chiefly in autumn.

Grey Phalarope, *Phalaropus fulicarius*, Linn.—Two were shot at Greencastle, on the west side of Lough Foyle, on the 13th or 14th of October. Mr. Campbell writes, "Through the kindness of Mr. P. Crosbie I was enabled to examine and identify them." From the description Mr. Crosbie gave us a day after the occurrence I had little doubt they were Phalaropes, but the Grey Phalarope is a rare and uncertain winter visitor to Ireland.

Pink-footed Goose, *Anser brachyrhynchus*, Baillon.—Mr. Campbell writes:—"The prize, from an ornithological point of view, brought in by the storm, was a Pink-footed Goose, which I had the good fortune to find in Mr. Divine's poultry-shop, on October 21st. It is a new bird to the

Irish list. Mr. Patterson has confirmed my identification of the species, and I have sent it to him to be placed in the Belfast Natural History Museum."—H. CHICHESTER HART (Carrablagh, Portsalon, Letterkenny).

[See Mr. Patterson's note on this specimen below.—ED.]

Pink-footed Goose in Ireland.—About the 19th of October last a Pink-footed Goose, *Anser brachyrhynchus*, was shot on Lough Swilly, and sold to a poulterer in Londonderry. It was bought by Mr. D. C. Campbell, of that city, who had it preserved, and he sent it to me to be identified. It is undoubtedly a Pink-footed Goose, and the first recorded from Ireland. It is about 28 inches long, with pink legs and feet, and pink on bill well marked. Mr. Campbell has generously presented it to the Belfast Museum.—ROBERT PATTERSON (1, Windsor Park Terrace, Belfast).

Roller in Co. Donegal.—I have examined a Roller (*Coracias garrulus*) which was shot on October 10th at Burt Level Slob, Co. Donegal, as I am informed by Mr. D. C. Campbell. It was feeding in a field of oats and beans, and had evidently been searching for insects, as its bill had some earth adhering to it.—ROBERT PATTERSON.

Bernacle Goose at North Berwick.—It may perhaps be worth recording that a fine female Bernacle Goose, *Bernicla leucopsis*, was shot on October 22nd, 1891, at North Berwick, and is now in my possession. This is the only one I have had for several years past; formerly they were fairly common in our Market Hall almost every winter.—F. COBURN (7, Holloway Head, Birmingham).

Bernacle Goose at Scarborough.—During the early part of September last a large flock of Bernacle Geese was seen frequenting the coast to the north of Scarborough. On Sept. 19th twenty-nine of these birds were seen at Low Fields Farm, Brompton, about nine miles from Scarborough, and two of them were shot. One which I examined appeared to be a mature bird, in full plumage, but, having been skinned, I was unable to distinguish the sex.—WILLIAM J. CLARKE (44, Huntriss Road, Scarbro').

A White Java Sparrow.—When staying at Brighton a short time ago I saw a white Java Sparrow at a bird fanciers, and I particularly noticed it had black eyes.—PERCY F. BUNYARD (3, Wellington Road, Ashford, Kent)

Bittern in Co. Meath.—A specimen of the Common Bittern, *Botaurus stellaris*, was shot by me on November 12th at Randlestown, near Navan, Co. Meath. It rose within twenty yards of me, from the side of a drain in an open field. Two good-sized frogs were extracted from its gullet.—JOHN BENSON (Randlestown).

Fork-tailed Petrel in Ireland.—As additions to my note of Fork-tailed Petrels in Ireland (Zool. 1891, p. 468), I may state that on October 6th one was found dead in the city of Derry; on the 13th one was seen flying

up the river there, alongside the quays. On the morning of the 14th of October two were seen alighting on the grass in Crawford Square, Derry; after resting for a short time they took flight, seemingly much exhausted. Two Fork-tailed and three Storm Petrels were picked up on Rathlin Island during the month of October. Three Fork-tailed Petrels were seen near Kilkeel, Co. Down. — ROBERT PATTERSON (1, Windsor Park Terrace, Belfast).

Rare Birds at Kingsbridge, South Devon.—During the tempestuous weather of Oct. 14th and succeeding days, a large flock of Grey Phalaropes were on the coast. I found it very interesting watching the buoyant little swimmers on the morning of the date mentioned; they would allow the incoming wave to wash them almost high and dry on the sands, and then, as the succeeding billow threatened to engulf them, they would rise from the water, just top the wave, and settle a little farther out. This went on the whole time I was on the sands. As to numbers, there were hundreds along the shore of the bay, and, after counting as many as sixty from where I stood, I had to give up the task on account of the sand and spray drifting into my face. A good many birds sought shelter in the fresh water of the Leas, and these appeared to be seeking food along the edges of the grassy banks. On the following day I again visited Thurstone Sands, and found the majority of the birds had passed on; but saw, at the exit of Milton Lea, a Buffon's Skua, which I shot. Numbers of these birds had been shot at the same place on the previous day, having come in after I had left the sands; but a record of these birds will reach the pages of 'The Zoologist' from another source. On the 19th, as I had been told by a Beesands fisherman that there were a lot of so-called "mackerel birds" in Start Bay, I determined to ascertain, if possible, their species. Arriving at the little fishing hamlet, I found the surf breaking very heavily on the shore; but two muscular young fishermen instantly offered to launch their boat when they learnt my errand. We got afloat, and soon they pointed out the "mackerel birds," which were easily identified as Terns, both the Common and Arctic species. I had secured specimens of both, and was rowing along not far from the shore, when my attention was arrested by a small dark Gull—the difference of flight between this bird and the Terns being marked—coming towards us; it afforded an easy shot, and was dropped. When I got it into the boat I saw by its forked tail I had secured one of the rarest Gulls in the British list, namely, a Sabine's Gull in immature dress. The figure in the last edition of Yarrell's 'British Birds' gives a very accurate representation of the bird. On dissection the sex proved to be female. On the following day a Scoter was brought me, which had been shot on the estuary. I casually looked at the bird, and thought it a Common Scoter, and should have sent it away but for the answer of the boy, who said, "Father told me to fling it into the tide if you didn't

want it." That being the case I retained it, and, on a more careful examination, was struck by the size of its head, the high arching of the bill, as well as the feathered culmen, and the white spots about the head, while the absence of white on the wing showed that it was not the Velvet Scoter; it proves to be a young male Surf Scoter, *Ædemia perspicillata*, and the entire absence of fat from the body leads me to suppose it had recently been driven on our coast. The stomach contained marine grass, small shells, and pebbles. Dr. Elliot-Coues, in his 'Key to North American Birds,' gives a very good figure of the head of the young male of this species, which is very different in marking to the adult male or female.—EDMUND A. ELLIOT (Kingsbridge, South Devon).

Variation in Plumage of Woodpeckers and Nuthatch.—My experience points to the fact that Woodpeckers—and especially the green species—are not liable to much variation in plumage, although we sometimes see a specimen the pale yellowish green of the under parts of which is dappled with darker arrow-headed markings, attributable, I think, to immaturity. A short time ago I saw a male Green Woodpecker, the upper plumage of which was unusually bright with its mixtures of green and yellow; but the whole under parts, from beak to tail, were of a uniform dark leaden grey, reminding one of the breast and belly of the Water Rail, *Rallus aquaticus*. It had been badly shot, and, being in an advanced state of decomposition, was not preserved. I recollect a few years ago seeing a Nuthatch, the entire plumage, especially the under parts, of which were of the same dark hue. Is it likely that the bark of trees has anything to do with darkening the lighter parts of the plumage of scansorial birds? The white patches upon the plumage of *D. major* and *minor* are often more or less tinged with a dusky shade, whilst, on the contrary, I once saw a *Picus viridis*, the colours of which appeared to be washed out; and even the larger wing-feathers, usually dappled with white, were of a uniform dull buff. Whilst on the subject of variation in Woodpeckers, I may mention a white *D. major*, which some readers of 'The Zoologist' may have seen in a woodman's cottage in the Forest, and which eventually, I believe, was purchased by the late Mr. Marshall, of Belmont, Taunton.—G. B. CORBIN (Ringwood).

Spotted Redshank in Co. Dublin.—On the 24th September last I was fortunate enough to shoot a specimen of this rare wader on the shore of Baldoyle Estuary. This, I believe, makes the fourth recorded occurrence of *Totanus fuscus* on our east coast, the three other specimens obtained in Ireland having been shot by Mr. Warren, of Moyview, Ballina, in the Moy Estuary (Zool. 1887, p. 468, and 1889, p. 35). My specimen is a bird of the year, having the breast clouded over with dusky grey. — E. WILLIAMS (2, Dame Street, Dublin).

FISHES.

Bonito on the Cornish Coast.—On Nov. 16th I had brought to me a fine specimen of the Bonito, *Thynnus pelamis*. The fish was 2 ft. 2½ in. in length, its girth behind the pectoral fin 1 ft. 4½ in., and weighed 13¼ lbs. The occurrence of this fish on the coast in spring is not uncommon; but I have never heard of one being found so late in the year before. The specimen referred to was washed ashore dead.—T. H. CORNISH (Penzance).

SCIENTIFIC SOCIETIES.

LINNEAN SOCIETY OF LONDON.

November 19, 1891.—Prof. STEWART, President, in the chair.

Mr. W. L. Brown was admitted a Fellow of the Society.

Mr. S. Jennings exhibited a collection of wild flowers made by him during a recent tour through the Rocky Mountains, California, and Mexico.

Prof. G. B. Howes exhibited some dissections of fish crania made by his pupil, Mr. R. H. Burne, B.A., in which the parts of the skeleton were so displayed that they might be studied in relation to the rest of the head and to the leading cranial nerves.

Mr. E. F. Cooper exhibited specimens of a new variety of *Potamogeton* from Loughborough, lately described and figured by Mr. Alfred Fryer (Journ. Bot., Oct. 1891).

Mr. A. W. Bennett exhibited and made remarks upon some specimens of *Hydrodictyon utriculatum*, Roth. (*H. reticulatum*, De Toni), and some drawings of anomalous *Cypridium* and *Disa*.

Mr. W. Carruthers gave a graphic account of a recent visit to Sweden in search of original portraits of Linnæus, and detailed the results of his enquiries. His remarks were illustrated by an exhibition of engravings and photographs.

A paper was then read by Mr. Thomas Hick, "On a new fossil plant from the Lower Coal Measures." An interesting discussion followed, in which Mr. Carruthers, Mr. G. Murray, Prof. F. O. Bower, Prof. Marshall Ward and others took part.

Dec. 3.—Prof. STEWART, President, in the chair.

The following were elected Fellows:—Sir Walter Sendall, Messrs. T. M. Macknight, W. A. Blaker, C. Frost, H. Sutherland, J. Keys, W. S. Campbell, A. Molineux, and W. H. Strachan.

The President announced the recent bequest by the late Sir George MacLeay, K.C.M.G., of a marble bust of his father the late Dr. William Sharp MacLeay, formerly a Fellow and Vice-President of the Society.

The President then exhibited a series of specimens of a South American

beetle, showing the extremes of variation of colour observable within the limits of a single species.

Mr. J. E. Harting exhibited a photograph of an abnormally situated nest of the Chimney Swallow, *Hirundo rustica*, which had been built for the second time on a swinging hook in an outhouse, and made some remarks on three recorded cases of Swallows nesting in trees, a most unusual habit.

The Botanical Secretary read a paper by Mr. W. West on the Fresh-water Algæ of the West of Ireland, and exhibited, by way of illustration, a number of preparations under the microscope and a series of beautiful drawings by the author. The paper was criticised by Messrs. A. W. Bennett and E. M. Holmes, both of whom testified to the excellence of the work done and the value of the drawings.

The Zoological Secretary next read a paper by Mr. W. H. Strachan on the Tick Pest of Jamaica, which was characterised as of so serious a nature as to demand investigation by entomologists, with a view to a remedy. An interesting discussion followed, in which Mr. D. Morris gave a variety of details from personal experience during a residence of seven years in Jamaica, and Mr. A. D. Michael pointed out the generic characters of certain West Indian Ticks which were likely to include those found in Jamaica by Mr. Strachan. The question of remedy for this plague was discussed by Dr. John Lowe and Messrs T. Christy, C. Breeze, and T. J. Briant.

ZOOLOGICAL SOCIETY OF LONDON.

Nov. 17, 1891.—Dr. A. GUNTHER, F.R.S., Vice-President, in the chair.

The Secretary read a report on the additions that had been made to the Society's Menagerie during October, and called special attention to the following:—A young Buffon's Skua, *Stercorarius parasiticus*, captured near Christchurch, Hampshire, and presented by Mr. E. Hart; and a Land-Crab, *Geocarcinus ruricola*, from the island of Fernando Noronha, brought home and presented by Mr. D. Wilson-Barker.

The Secretary read a letter from Dr. G. Martorelli, of Milan, enclosing a coloured drawing of both sexes of a hybrid Duck bred in the Public Garden of Milan, between *Branta rufina*, male, and *Anas boschas*, female.

Mr. G. A. Boulenger gave an account of the various forms of the Tadpoles of the European Batrachians, and a statement of the characters by which the different species may be distinguished in this stage of their existence.

A communication was read from Mr. Edgar A. Smith, containing descriptions of new species of shells from New South Wales, New Guinea, and the Caroline and Solomon Islands, based on specimens lately presented to the British Museum by Mr. John Brazier, of Sydney.

Lord Walsingham gave an account of the Micro-Lepidoptera of the West Indies, based primarily on the collections made in St. Vincent and

other islands by Mr. H. H. Smith, under the direction of the joint Committee of the British Association and the Royal Society for the exploration of the Lesser Antilles.

A communication was read from M. E. Simon, containing the first portion of an account of the Spiders of the island of St. Vincent, based on specimens obtained under the direction of the same Committee.

A communication was read from Mr. H. Nevill, urging the importance of founding an experimental Zoological Station in the Tropics, and advocating the claims of Trincomalee, in Ceylon, for such an institution.

Dr. Johnson Symington read a paper on the nose, the organ of Jacobson, and the dumbbell-shaped bone in the *Ornithorhynchus*.

Mr. A. Smith-Woodward read a paper on a mammalian tooth from the Wealden Formation of Hastings, being the first trace of a Cretaceous Mammal discovered in Europe. This remarkable fossil the author was inclined to refer provisionally to the genus *Plagiaulax* of the Purbeck Beds, and to call *Plagiaula dawsoni*, after its discoverer.

A communication was received from Mr. C. Davies Sherborne, giving an exact account of the dates of issue of the parts, plates, and text of Schreber's 'Säugethiere.' Great difficulties in synonymy had arisen from previously imperfect knowledge of these dates.

December 1.—HENRY SEEBOHM, F.L.S., F.Z.S., in the chair.

Mr. Sclater exhibited a specimen of a Shearwater obtained near Sydney, and brought from Australia by Prof. Anderson Stuart. This specimen had been determined by Mr. Salvin to belong to *Puffinus gavia*, a New Zealand species not hitherto known to occur in Australia.

Mr. Seebohm exhibited and made remarks on specimens of several very interesting birds recently obtained in Ireland. Amongst these was an example of the Yellow-browed Warbler, *Phylloscopus superciliosus*, obtained on the Tearaght Rock, the most westerly station in Europe. [These were recorded in 'The Zoologist,' 1891, p. 186.]

Dr. E. Hamilton exhibited a specimen of the Red-breasted Snipe of North America, *Macrorhamphus griseus*, obtained in Scotland. [Recorded in 'The Zoologist,' 1891, p. 427.]

Mr. W. B. Tegetmeier exhibited the heads of a cock Pheasant and two Rooks, illustrative of the abnormal form of the bill in birds caused by injuries to that organ during life.

Mr. G. A. Boulenger read some notes on specimens of Reptiles from Transcaspia recently received by the British Museum, and pointed out that examples of several well-known Indian species occurred in this collection.

A communication was read from Miss E. M. Sharpe, containing the second portion of her descriptions of new Butterflies from British East Africa, collected by Mr. F. J. Jackson during his recent expedition.

Mr. A. D. Michael read a paper upon the association which he had observed between certain Acarines of the family *Gamasidæ* and certain species of Ants. The author came to the following conclusions:—(1) that there is an association between some Gamasids and Ants; (2) that a species of Gamasid usually associates with one or two species of Ant preferentially; (3) that the Gamasids of Ants'-nests are not usually found elsewhere; (4) that the Gamasid abandons the nest if the Ant does; (5) that the Gamasids live upon friendly terms with the Ants; (6) that the Gamasids are not true parasites; (7) that they do not injure the Ants or their young; (8) that the Gamasids will not eat dead Ants, and are probably either scavengers or messmates.

A communication was read from Mr. Edward Bartlett, containing an account of the specimens of Rhinoceros from Borneo contained in the Museum of Sarawak.

A communication was read from Mr. T. T. Somerville, of Christiania, containing notes on the Lemming (*Myodes lemmus*).—P. L. SCLATER, Sec.

ENTOMOLOGICAL SOCIETY OF LONDON.

December 2, 1891.—The Rt. Hon. Lord WALSINGHAM, M.A., LL.D., F.R.S., Vice-President, in the chair.

Mr. Henry A. Hill, of 132, Haverstock Hill, Hampstead, N.W.; Mr. Frank Nelson Pierce, of 143, Smithdown Lane, Liverpool; and Mr. Carleton F. Tufnell, of Greenlands, Border Crescent, Sydenham, S.E., were elected Fellows of the Society.

Dr. D. Sharp exhibited and commented on a number of photographs of various species of *Lucanidæ* belonging to M. René Oberthür.

Mr. C. G. Barrett exhibited a number of specimens of local forms and varieties of Lepidoptera, taken by Mr. Percy Russ near Sligo, including *Pieris napi*, var. near *bryoniæ*; *Anthocharis cardamines* (male), with the orange blotch edged with yellow, and yellowish forms of the female of the same species; very blue forms of *Polyommatus albus*; males of *P. alexis*, with the hind margin of the under wings spotted with black, and very handsome forms of the female; also varied series of *Agrotis cursoria*, *A. tritici*, *A. valligera*, *Hydræcia micacea*, *H. nictitans*, *Epunda lutulenta*, *Hadena protea*, *Odontoptera bidentata*, *Cidaria immanata*, *C. testata*, *C. pyraliata*, and *Boarmia repandata*.

The Rev. S. St. John exhibited two specimens of *Lycana argiades*, taken in Somersetshire by Dr. Marsh in 1884; three specimens of *Deilephila euphorbiæ*, bred from larvæ found feeding on *Euphorbia paralias* on the Cornish coast in September, 1889; and a series of various forms of *Anchocelis pistucina*, all taken in a garden at Arundel. Lord Walsingham, Mr. Barrett, and Mr. McLachlan took part in the discussion which ensued.

Mr. Jenner Weir exhibited and made remarks on two dark specimens of *Zygana minos* which had been caught by Mr. Blagg in Carnarvonshire. He remarked that the specimens were not representatives of complete melanism, and suggested that the word "phæism"—from *φαιός*, dusky—would be a correct word to apply to this and similar departures from the normal coloration of a species.

Mr. C. J. Gahan exhibited specimens of the common "book-louse," *Atropos pulsatoria*, Fabr., which he had heard making a ticking noise similar to that made by the "death-watch" (*Anobium*).

Mr. B. A. Bower exhibited the following rare species of Micro-Lepidoptera:—*Spilonota pauperana*, Fröl.; *Gelechia osseella*, Stn.; *Chrysoclysta bimaculella*, Haw.; and *Elachista cingilella*, Fisch. Lord Walsingham and Mr. Tutt made some remarks on the specimens.

Mr. R. Adkin exhibited a variety of *Anthocharis cardamines*, and one specimen of *Sesia scoliaformis* bred from a larva found at Rannoch.

Mr. G. T. Baker read a paper entitled "Notes on *Lycæna* (recte *Thecla*), *Rhymnus*, *Tengstræmii*, and *Pretiosa*." A discussion followed, in which Lord Walsingham, Capt. Elwes, and Mr. Baker took part.

Mr. F. Merrifield read a paper entitled "The effects of artificial temperature on the colouring of *Vanessa urticae* and certain other species of Lepidoptera." The author stated that both broods of all three species of *Selenia*, *Platypteryx fulcataria*, *Vanessa urticae*, *Bombyx quercus* and var. *callunæ*, and *Chelonia caja* were affected by temperature in the pupal stage, the lower temperature generally producing the greater intensity and darkness of colour; some of the *Vanessa urticae* made a near approach to the var. *polaris* of Northern Europe. A long discussion ensued, in which Mr. E. B. Poulton, Mr. McLachlan, Prof. Meldola, Mr. Barrett, Mr. Jenner Weir, and Lord Walsingham took part.

Mr. W. Bateson read a paper entitled "On the variation in the colour of the cocoons of *Eriogaster lanestris* and *Saturnia carpini*," and exhibited a large number of specimens in illustration of the paper. Lord Walsingham congratulated Mr. Bateson on his paper, and on the intelligent care and method shown in his experiments, and said that he was glad to see that at Cambridge there was an entomologist ready to enter this interesting field of investigation, and perhaps at some future day to contest the palm with Mr. Poulton as representing the sister University of Oxford. He had noticed that the larvæ of *S. carpini*, if left in a box with dead food, and probably partially starved, made a light-coloured cocoon; but that when the cocoon was made under natural conditions, on living food-plants on the moors, it was of a dark colour. Mr. Poulton, Prof. Meldola, Mr. Bateson, and others continued the discussion.—H. Goss & W. W. Fowler, Hon. Secs.

